



PLANT FACT SHEET

Artocarpus heterophyllus Lam.

GENUS *Artocarpus* FAMILY Moraceae

COMMON NAMES Jackfruit

EDIBLE PARTS AND USES

Edible parts: Fruit, Seeds, Leaves, Flowers, Vegetable

The flesh of ripe fruits can be eaten raw.

Unripe fruit can be cooked and eaten as a vegetable. They are fried in curries, preserved in syrup, dried, cooked in milk or made into alcoholic drinks. Caution: Alcohol is a cause of cancer.

Unripe fruit are pickled.

The seeds (5%) can be roasted and eaten. They are also boiled. (Some kinds have more seeds).

The young leaves and flowers are edible. They are eaten mixed with chilis, fish paste, sugar, salt etc.

DESCRIPTION

An evergreen tree up to 20 m tall and in the breadfruit family. Trees form many branches but have one or two main trunks. The bark is smooth and dark green. Leaves of young trees have 1 or 2 lobes but mature leaves are long (15 cm) and entire. They are leathery, deep green and glossy. Flowers occur on spikes, on stalks from the trunk or main branches. Some stalks only have male flowers, others only have female flowers while some have both male and female spikes. Generally male flowers are on short stalks among the leaves, and female flowers are on trunks. Male flowers are 5 cm long by 2 cm wide and are dull green. Female flowers are bright green. The very large spiny fruit grow on main branches and the trunk. The fruit is a composite fruit made up from the many individual flowers of the flower cluster. Fruit can be 1 m long and weigh 36 kg. They have 6 sided fleshy spines. Each seed is surrounded by a yellow fleshy sheath. Seed are 2-4 cm long and 1-2 cm wide. There can be 100-500 seed in a fruit. Unlike breadfruit, there are no seedless Jackfruit. When ripe the unopened fruit has a strong smell.

HABITAT

A tropical plant. It grows in the tropical lowlands and up to about 1200 m altitude. It grows in Nepal up to 800 m altitude. It can stand some drought, but not water-logging. Trees do best where there is year round rainfall. An annual rainfall between 1,000-2,400 mm is best. It yields poorly where humidity is low. It does best in a well drained, frost-free location that is warm and sunny. They are slightly more tolerant of cold than breadfruit. It suits areas with a temperature range 22-35°C. Trees can survive occasional frosts down to 0°C. It is best with a pH of 6-6.5. They have some wind and salt tolerance. It grows between 25°N and 30°S. In XTBG Yunnan. At ECHO. It suits hardiness zones 10-12.

PRODUCTION

Cultivation

Trees are usually sown from seeds, but it is best to sow them in their final location as the plants don't transplant easily. They have a long delicate taproot which makes transplanting difficult. Fresh seed must be used (less than 4 weeks). If fresh seed are planted immediately they grow more quickly and more seeds germinate. It is better to use larger seed. The fleshy layer around the seeds should be removed. Seeds can be soaked in water for 24 hours to give better germination. It is best to sow seeds with the embryo pointing downwards and also with the narrow end pointing downwards. Seeds germinate in 3-8 weeks. A spacing of 12 m is suitable. Where trees are used as a wind break, trees are spaced 6 m apart. Air-layering can be used, and stem cuttings are also possible. Air layering is best done in the rainy season. Rooting hormones can be used to help roots develop. The shoots used for air layering should be 2-3 years old and brown in colour. To produce air layers, a small branch 3-4 cm across, is cut below a node and only part way around the stem. A ring 5-7 cm wide is cut and a layer of sand wrapped around the stem and covered with plastic. Using 1% IBA growth substances helps shoots to strike and form roots. Roots form in about 22 days and the stem can be cut off and planted after about 2-3 months. Because trees vary in their growth rate, how quickly they flower and fruit, and in the fruit quality, it is best to grow plants by using vegetative parts from good trees. This can be done by budding or grafting onto 12 month old seedlings already established in the field. Budding and grafting are not easy with jackfruit. Because the fruit develops on the trunk, early pruning to allow 2-3 trunks to develop is helpful. As well, trees can be topped to prevent them becoming too tall and large.

Harvesting and Seed Production

Jackfruit is a fast growing tree. They can be 7 m tall by 3 years old. Trees begin bearing after about 8 years. The fruiting season lasts about 4 months in subtropical places, but fruit can be produced year round in tropical places. Fruit take about 100 to 120 days from when the flower is pollinated until a fully mature fruit is developed but can take another 4 months to ripen. Trees tend to have heavy crops every second year. Pollination is by wind but hand pollination has been used to improve the amount of fruit set. Fruit can be up to 50 kg in weight. Fruit change from green to yellow when mature. Up to 250 fruit can be produced each year on large trees. Fruit do not store well but can be kept in a cool store for 4-6 weeks at 11°-12°C and with high humidity.

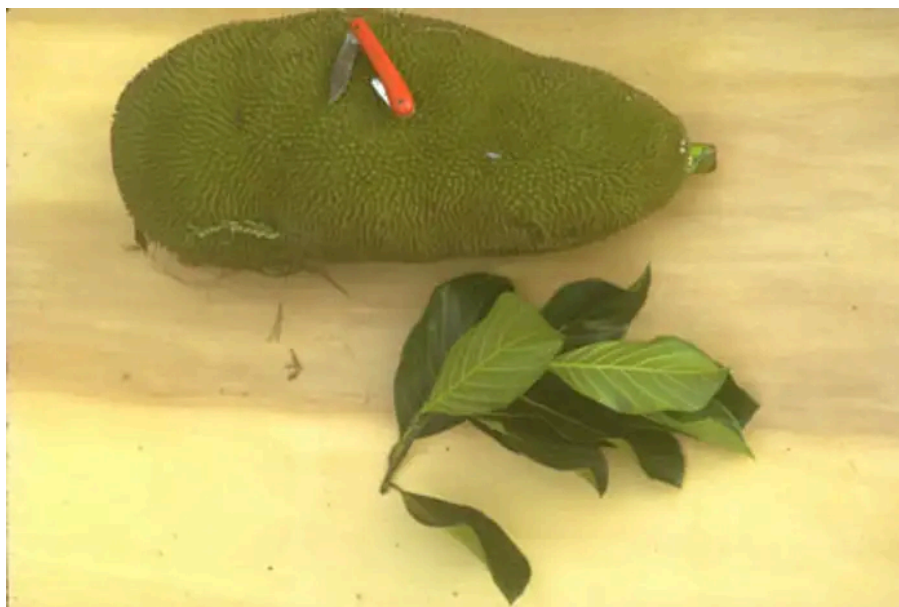
NOTES

Jackfruit wood is a useful timber. There are about 50 *Artocarpus* species. They are in the tropics and subtropics of Asia and the Pacific.

It possibly has anti-cancer properties.

Fruit are high in folates 53-84µg/100.

PICTURES



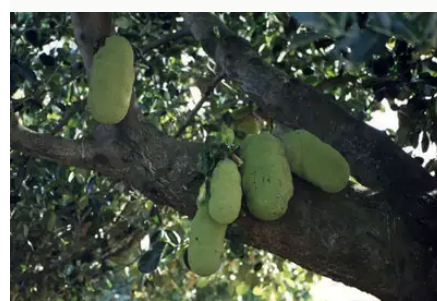
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